

# **TASK ORDER**

## **(TO) # GST0011AJ0048**

### **Modification PS27**

## **Installation GeoBase Support**

**in support of:**

***Pacific Air Forces (PACAF) and Air Force  
Global Strike Command (AFGSC)***



**U.S. AIR FORCE**

**Task Order Conducted under FAR 16**

**issued to:**

**L-3 National Security Solution, Inc. under the Alliant  
Governmentwide Acquisition Contracts**

**issued by:**

**The Federal Systems Integration and Management Center (FEDSIM)  
1800 F Street NW  
Suite 3100  
Washington DC 20405**

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**FEDSIM Project Number AF00552**

NOTE: The section numbers in this Task Order correspond to the section numbers in the Alliant Contract. Section C of the Contractor's Alliant Contract is applicable to this Task Order and is hereby incorporated by reference. In addition, the following applies:

## **C.1 GENERAL PROJECT OVERVIEW**

### **C.1.1 PURPOSE**

The purpose of this order is to provide Installation GeoBase Support to continue to improve the safety and effectiveness of the warfighter by evolving the GeoBase Garrison, GeoReach and Expeditionary GeoBase environments at Pacific Air Forces (PACAF) and by “standing up” and sustaining the Garrison GeoBase capability at Air Force Global Strike Command (AFGSC).

PACAF and AFGSC need Contractor Installation GeoBase Support to attain, maintain and sustain their GeoBase vision of one geospatial information structure that electronically depicts all outside and inside Civil Engineering infrastructure on each Air Force installation. The Installation GeoBase Support capability is focused on development, exploitation, and sustainment of a single, common, secure geospatial information structure to support basing requirements and increase situational awareness at Air Force installations. Specifically, the required Installation GeoBase Support Contractor services at PACAF and AFGSC shall support the attainment of the Installation GeoBase Support capability to support the warfighters' unique, emerging needs in both the Expeditionary (including GeoReach) and Garrison GeoBase environments by:

- Developing and maintaining standard yet agile core capabilities depicting air installations of consequence

- Employing standard quality assurance practices to create, collect and maintain standard geospatial data sets

- Implementing a geospatial enterprise architecture for long-term sustainment that achieves increased utility and savings from the GeoBase Service capabilities

- Developing web-based geospatial tools and applications that demonstrate the value of the GeoBase Service and leverage capabilities to achieve seamless mission integration.

### **C.1.2 BACKGROUND**

GeoBase, commissioned in July 2001, supports the Air Force (AF) Civil Engineering (CE) mission. It does this by providing accurate and current satellite imagery and map data representing real-world features and conditions for AF installations, ranges, and property. GeoBase strives to provide ready access to its core capabilities through the four GeoBase services: **Strategic GeoBase**, **Garrison GeoBase**, **Expeditionary GeoBase**, and **GeoReach**. Committed personnel and sophisticated information technology (IT) infrastructure enable these

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services. The processes associated with the GeoBase Service's core data and capabilities fall into four primary services. **Strategic GeoBase** provides visualization from a broader, regional level that emphasizes interactions between the AF installation, the surrounding community, and other Department of Defense (DoD) installations. **Garrison GeoBase** integrates many overlapping mapping efforts across installations, providing a structure for Base Operational Support and a training environment for warfighters who will execute Expeditionary GeoBase operations at Forward Operating Locations (FOL). **Expeditionary GeoBase** provides a streamlined, forward-deployed of Garrison GeoBase capabilities. **GeoReach** is an extension of Expeditionary GeoBase that provides an expeditionary site mapping and base location capability.

Through its data, capabilities, and primary services GeoBase has committed itself to efficient and effective support for CE, AF, and DoD decision makers. The Program's reach extends across the greater GeoBase community to provide the installation geospatial situational awareness necessary to serve national interests. Emerging and evolving mission requirements will drive further advancements in GeoBase processes and capabilities, for a program rooted in standard yet agile warfighter support.

To meet current and emerging requirements, the GeoBase Service will pursue five goals established by the AF Civil Engineer (AF/A7C). GeoBase will:

- Provide a standard yet agile AF program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments

- Create, enforce and maintain geospatial data standards through quality assurance

- Develop a geospatial enterprise architecture that achieves increased utility and savings
- Obtain adequate resources to sustain and improve geospatial capabilities

- Ensure customers and stakeholders recognize the value of GeoBase and leverage program capabilities to achieve seamless mission integration.

By achieving these Goals, GeoBase will realize a vision of acceptance and accessibility across the AF, for a program that provides structured geospatial capabilities for a full range of mission applications.

### **C.1.3 AGENCY MISSION**

#### **C.1.3.1 PACAF GEOBASE MISSION**

The Pacific Air Forces (PACAF) is an Air Force Major Command responsible for the Pacific Area of Responsibility (AOR) with a global reach from the west coast of the Continental United States (CONUS) to the East coast of the African continent. This Statement of Work requires on-

site Contractor technical assistance at PACAF Headquarters as well as a surge capability to quickly respond to manmade and natural disasters.

### **C.1.3.2 AFGSC GEOBASE MISSION**

The Air Force Global Strike Command (AFGSC) is an Air Force Major Command in charge of the United States' nuclear arsenal. AFGSC assumed responsibility for the nuclear-capable assets of Air Force Space Command in December 2009 and the nuclear-capable assets of Air Combat Command in February 2010 as part of a phased approach to unify all Air Force nuclear-capable assets under one command. AFGSC was activated in August 2009 with its Headquarters (HQ) at Barksdale AFB, LA. The AFGSC CE manages installations within CONUS and will soon standup the initial AFGSC GeoBase capability.

### **C.1.4 CURRENT IT/NETWORK ENVIRONMENT**

PACAF and AFGSC have invested a number of technologies to support the GeoBase Service. It is expected that PACAF and AFGSC will upgrade the infrastructure as necessary to remain current with industry standards for tool utilization. As a result, the Contractor will need to have the capabilities and resources to provide the expertise, as applicable. This includes:

- ESRI's ArcGIS client solutions (up to current version)

- Some JAVA and XML programming.

- Earth Resources Data Analysis System (ERDAS) Imagine Professional Suite

- Current Oracle ( 11g) and web development tools

- The Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE ( 3.0)

- Other applicable metadata content and accuracy standards (e.g. Federal Geographic Data Committee [FGDC] or Defense Installation Spatial Data Infrastructure [DISDI] Geospatial Metadata Profile [DGMP]).

Current network topologies for AFGSC and PACAF are depicted in *Section J, List of Attachments*.

#### **C.1.4.1 PACAF IT/NETWORK ENVIRONMENT**

Over the past several years, each PACAF installation has procured initial hardware and software resources and has migrated legacy systems towards the GeoBase concept of operations. PACAF GeoBase has a presence on both unclassified and classified military networks. Web servers deliver the web viewer applications to GeoBase user's desktops. A full-time Web Developer on-site at PACAF HQ provides the expertise in web programming languages, sets up and configures the web servers, and develops geospatial tools web applications. ESRI ArcGIS (Currently 9.3.1) Server and Oracle 11g are the back-end applications. During the task order, it is expected that PACAF and AFGSC will upgrade the infrastructure as necessary to remain current with industry standards. All Contractor personnel that work on or configure the GeoBase servers are designated as Information Assurance

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Technical (IAT) Level II and must comply with DoD Directive 8750.01-M certification requirements (see Section H.3.1).

Each PACAF installation has 1 database server and 1 web server to support their local customers. HQ PACAF has 1 database server that holds the consolidated GeoBase data from all the PACAF bases and 4 web servers for hosting various PACAF-wide GeoBase applications and web viewers. Average Civil Engineering squadron users at each installation are around 300, with an increase of 300 additional users from Wing squadrons and tenants. Recent monthly averages for PACAF HQ GeoBase Servers are 150 active log-on sessions and 3,500 website hits. Servers shall be acquired and periodically refreshed by the Contractor under this work statement and are configured by the Contractor GeoBase Architect (Database / Network Administrator). The GeoBase Architect provides the technical expertise on-site at PACAF HQ to setup and maintain an enterprise geospatial information system that encompasses installations within PACAF. Duties include configuring and troubleshooting the GeoBase geospatial databases and web servers and ensuring that the GeoBase architecture conforms to the latest AF Information Assurance policies and procedures. The Contractor GeoBase Architect obtains and keeps current an Authority to Connect / Authority to Operate for the PACAF GeoBase system.

### **C.1.4.2 AFGSC IT/NETWORK ENVIRONMENT**

AFGSC is a new command formed in FY 2010 and is comprised of bases that formerly reported to other AF commands. Current Geospatial information is not highly integrated and resides in separate legacy systems. The new geospatial databases will form a foundation for migrating legacy systems to new enterprise systems that implement the GeoBase concept. AFGSC is just beginning its legacy system migration (initiating in FY 2011) to attain their GeoBase vision of one geospatial information structure. AFGSC plans to utilize a GeoBase software development approach similar to that used for the PACAF installations. Average Civil Engineering squadron users at each installation are around 250, with an increase of 150 additional users from Wing squadrons and tenants. Contractor support will facilitate continued migration of AFGSC legacy systems and the ongoing development of new enterprise information systems to support the AFGSC GeoBase Service at multiple AFGSC installations. Hardware and software tools may be acquired and periodically refreshed by the Contractor under this work statement where not otherwise available under AF-wide Contracts (see H.24 and H25).

### **C.2 SCOPE OF WORK**

The Contractor shall provide Legacy Systems Migration for new GeoBase Service users at AFGSC to attain the GeoBase Service. The Contractor shall sustain the PACAF GeoBase Service and related support (including mission critical support, see H.28) and evolve the system by developing new geospatial tools. Non-Key Personnel Requirements are summarized in H.3. Projected on-site staffing requirements at start-up are summarized in *Section H.3.2*.

The Contractor shall provide GeoBase technical assistance principally at government sites but also at Contractor sites in the areas that include but are not limited to program and project management, strategic and implementation planning, resource inventory and evaluation, system and database administration, user needs assessments, business process reengineering, resource inventory and evaluation, interface control documentation, system documentation, service assurance, specialized support related to geospatial tools and applications software development, software/system certification and accreditation, preparation and implementation of service level agreements, training, imagery searches, data acquisition, development and integration of geospatial data, and hardware/software tool acquisition, configuration, integration, operation and maintenance, and administration / policy support.

### **C.2.1 PACAF SCOPE OF WORK**

This task order supports PACAF Headquarters (HQ), PACAF and Joint bases and airfields and installation of consequence throughout the Pacific Area of Responsibility (AOR) to facilitate the adoption, development, and implementation of installation geospatial systems and GeoBase concepts through sustainment and evolution of the GeoBase Service according to AF Strategic Vision, Goals and Objectives of the GeoBase Strategy Document (see *Section J, List of Attachments*) with particular emphasis on web-based geospatial viewers and new applications that leverage current geospatial databases. A comprehensive, integrated set of geospatial technical services is required to further develop and sustain the PACAF GeoBase Service to include state of the art technical support services that will allow PACAF to achieve its mission while staying abreast of evolving technology.

PACAF objectives include providing on-site support for geospatial data development and solutions implementation at each of the following units (currently two contractor staff positions at Republic of Korea Osan AFB are mission critical):

- Joint Base Pearl Harbor- Hickam (JBPH-H), HI
- Joint Base Elmendorf -Richardson (JBER), AK
- Eielson AFB, AK
- Osan Air Base (AB), Republic of Korea (ROK)
- Kunsan AB, ROK
- Kadena AB, Japan
- Misawa AB, Japan
- Yokota AB, Japan
- Joint Region Marianas, Guam
- Airfields identified as potential Forward Operating Locations (FOLs); currently over 150 airfields and installations of consequence to the Pacific Area of Responsibility (AOR)

Contractor representatives shall function as a liaison between these units and HQ PACAF to develop and maintain a viable partnership, and provide additional related technical assistance to develop and maintain installation GeoBase support. Initially, on-site support shall be

provided at all units except FOLs and Joint Region Marianas, Andersen AFB, Guam. Surge Contractor support may also be provided to Guam and other locations of consequence within the Pacific AOR. A combination of military, civilian and Contractor personnel staff each installation, normally led by a civilian or military head of the installation Geo-Integration Office (GIO). Generally, PACAF conducts imagery refresh on a five-year rolling cycle; i.e., imagery updates are scheduled at the different PACAF installations named in Section H.3.2 each year.

### **C.2.2 AFGSC SCOPE OF WORK**

This task order supports the migration of legacy systems to stand up and sustain the GeoBase Service at AFGSC Headquarters in Barksdale, LA and at current base locations and airfields and installations of consequence including but not limited to the following (to include others that may come under AFGSC command):

- HQ AFGSC, Barksdale, LA
- Barksdale AFB, LA
- Whiteman AFB, MO
- Minot AFB, ND
- Francis E. Warren AFB, WY
- Malmstrom AFB, MT
- Offutt AFB, NE (574<sup>th</sup> Strategic Operations Squadron[SOS])
- Vandenberg AFB, CA (625<sup>th</sup> Flight Test Squadron [FLTS])

Contractor on-site technical support will provide liaison between these units and HQ AFGSC to develop and maintain a viable partnership, and provide additional related GI&S technical assistance to develop and maintain Geospatial Information Systems and to facilitate AFGSC legacy system migration to stand up and sustain the AFGSC Garrison GeoBase Service and to support subsequent evolutionary development of the GeoBase Service in concert with the GeoBase Mission, Vision and Goals detailed in the GeoBase Strategy Document (*Section J, List of Attachments*). A comprehensive, integrated set of technical services is required to further develop and sustain the AFGSC GeoBase Service to include state of the art technical support services that will allow AFGSC to achieve its mission while staying abreast of evolving technology. AFGSC will use the techniques that have been successfully employed by PACAF, including the eventual development of applications and web-based geospatial tools and geospatial tools and applications that leverage AFGSC geospatial data and increase its accuracy and usefulness. The need for Geospatial imagery refresh will be heavier during the first two years of the task order and become more normalized in year three.

A combination of military, civilian and Contractor personnel staff each installation, normally led by a civilian or military head of the base level Geo-Integration Office (GIO). Initially, on-site Contractor support will be needed at HQ AFGSC, Barksdale AFB, Whiteman AFB and Minot AFB (see section H.3.2). The contractor will perform as part of the GIO team. This task order requires CONUS long distance travel requirements; an estimate of travel has been provided by the Government.

### **C.3 RESERVED**

### **C.4 TASKS**

The Contractor shall provide Information Technology (IT) Support in the areas of GeoBase systems and related programs. The area of new enterprise development requires a Contractor with a global reach who can evolve as the technology evolves. The Contractor shall assist with the implementation of current geospatial information systems (GIS) technology by providing installation geospatial information and support (IGI&S) services (hereinafter referred to as the GeoBase Service). As GIS technology changes, the Contractor shall provide personnel and tools to fulfill the client's need to keep their GIS systems state of the art to best satisfy mission requirements. The Contractor shall assist with these and any other geoenabled features of the GeoBase Service including the acquisition, development and enhancement of hardware and software tools, their integration into existing systems and training / re-training of personnel to effectively use them.

The Contractor shall perform the following tasks to complete this project:

- Task 1 – Provide Program Management Support
- Task 2 – Provide Installation GeoBase Support
- Task 3 – Acquire and Maintain Geospatial Data
- Task 4 – Acquire and Integrate Hardware and Software Tools
- Task 5 – Develop Geospatial Tools and Applications
- Task 6 – Conduct GeoBase Training

#### **C.4.1 TASK 1 – PROVIDE PROGRAM MANAGEMENT SUPPORT**

The Contractor shall provide program management support under this Task Order. This includes the management and oversight of all activities performed by Contractor personnel, including subordinate project managers and subcontractors, to satisfy the requirements identified in this Statement of Work (SOW). The Contractor shall identify a Program Manager (PM) by name, who shall provide management, direction, administration, quality assurance, and leadership of the execution of this task order. The contractor shall ensure that there will be minimum service disruption to vital Government business and no service degradation during and after transition. The Contractor shall provide a draft Transition In Plan deliverable that addresses the items in C.4.1.7 from an incoming Contractor perspective. The Contractor shall update the draft Transition In Plan submitted with their proposal and provide a final Transition In Plan as shown in Section F.

##### **C.4.1.1 SUBTASK 1 – COORDINATE A PROJECT KICKOFF MEETING**

The Contractor shall schedule and coordinate a Project Kick-Off Meeting at the location approved by the Government. The meeting will provide an introduction between the Contractor personnel and Government personnel who will be involved with the task order. The meeting will provide the opportunity to discuss technical, management, and security



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issues, and travel authorization (See *Section J, Attachments*), relocation, and the monthly update of Housing Allowances (HOLA), Cost of Living Allowances (COLA), and reporting procedures (relocation and HOLA / COLA are applicable only to PACAF and not to AFGSC). At a minimum, the attendees shall include vital Contractor personnel, representatives from the directorates, other relevant Government personnel, and the Federal Systems Integration and Management Center (FEDSIM) CO. The Contractor shall provide the following at the kickoff meeting:

Kick-Off Meeting Presentation

Final Transition-In Plan (draft provided with proposal)

The Contractor shall also provide, as a deliverable, the meeting minutes including any action items resulting from the kickoff meeting.

### **C.4.1.2      SUBTASK 2 – PREPARE A MONTHLY STATUS REPORT (MSR)**

The Contractor Program Manager shall develop and provide a MSR (*Section J, List of Attachments*) using MS Office Suite applications, by the 10th of each month via electronic mail to the PACAF and AFGSC Technical Points of Contact (TPOC) and the COR. The MSR shall include the following:

Activities during reporting period, by task (Include: On-going activities, new activities, activities completed; progress to date on all above mentioned activities). Start each section with a brief description of the task.

Problems and corrective actions taken. Also include issues or concerns and proposed resolutions to address them and the estimated completion date.

Personnel gains, losses and status (security clearance,

etc.). Government actions required.

Schedule (Shows major tasks, milestones, and deliverables; planned and actual start and completion dates for each).

Summary of trips taken, conferences attended, etc. (Attach trip reports to the MSR for reporting period).

Accumulated invoiced costs for each CLIN up to the previous month showing monthly and cumulative amounts invoiced for each incrementally funded account invoiced in sufficient detail to demonstrate that each funding increment was expended within the period of funds availability on task order.

Projected cost of each CLIN for the current month.

**C.4.1.3      SUBTASK 3 – CONVENE TECHNICAL STATUS MEETINGS**

The Contractor Program Manager shall convene a monthly Task Order Activity and Status Meeting with the TPOC, COR, and other vital government stakeholders. The purpose of this meeting is to ensure all stakeholders are informed of the monthly activity and status report, provide opportunities to identify other activities and establish priorities, and coordinate resolution of identified problems or opportunities. The Contractor Program Manager shall provide minutes of these meetings, including attendance, issues discussed, decisions made, and action items assigned, to the COR within five calendar days following the meeting.

**C.4.1.4      SUBTASK 4 – PREPARE A PROGRAM MANAGEMENT PLAN (PMP)**

The Contractor shall document all support requirements in a PMP. The PMP shall:

- describe the proposed management approach
- contain detailed Standard Operating Procedures (SOPs) for all tasks
- include milestones, tasks, and subtasks required in this task order to include capture and tracking of all work using control accounts, requirements traceability matrices, or other contractor mechanisms sufficient to ensure all milestones and deliverables associated with each funding increment are scheduled for completion within their period of funds availability
- provide for an overall Level 3 Work Breakdown Structure (WBS) and associated responsibilities and partnerships between Government organizations and the Contractor

include the Contractor's Quality Control Plan (QCP).

The Contractor shall provide the Government with a draft PMP, on which the Government will make comment. The final PMP shall incorporate Government comments.

The PMP is an evolutionary document that shall be updated yearly (at a minimum). The Contractor shall work from the latest Government approved of the PMP.

**C.4.1.5      SUBTASK 5 – PREPARE TRIP REPORTS**

The Government will identify the need for a Trip Report (if required) when the request for travel is submitted. The Contractor shall keep a summary of all long-distance travel, to include, at a minimum, the name of the employee, location of travel, duration of trip, and POC at travel location.

**C.4.1.6      SUBTASK 6 – UPDATE QUALITY CONTROL PLAN (QCP)**

The Contractor shall update the QCP submitted with their proposal and provide a final QCP as shown in Section F. The Contractor shall periodically update the QCP, as shown in Section F, as changes in program processes are identified.

**C.4.1.7      SUBTASK 7 – IMPLEMENT TRANSITION OUT PLAN**

The Transition-Out plan shall facilitate the accomplishment of a seamless transition from the incumbent to an incoming Contractor / Government personnel at the expiration of the task order. The Contractor shall identify how it will coordinate with the incoming and or Government personnel to transfer knowledge regarding the following consistent with FAR 52.237-3 CONTINUITY OF SERVICES (JAN 1991) :

- Project management processes
- Points of contact
- Location of technical and project management documentation
- Status of ongoing technical initiatives
- Appropriate Contractor to Contractor coordination to ensure a seamless transition.
- Transition of key personnel
- Identify schedules and milestones
- Identify actions required of the Government.
- Establish and maintain effective communication with the incoming Contractor/Government personnel for the period of the transition via weekly status meetings.

The Contractor shall implement its Transition-Out Plan no later than 120 calendar days prior to expiration of the task order.

**C.4.2 TASK 2 – PROVIDE INSTALLATION GEOBASE SUPPORT**

The PACAF and AFGSC GeoBase Service is enabled by a trained cadre of full-time Contractor professionals. Contractor support (almost entirely on-site at AF Headquarters and base level installations) is required to provide legacy system migration to stand up and sustain the GeoBase capability at AFGSC sites and to sustain and evolve the GeoBase Service at PACAF sites. The sites to be supported are listed in section C.2. The Government requires one or more on-site IT professionals at the sites listed in section C.2. On-site Contractor support includes at least one on-site Geographic Information Systems (GIS) Analyst at most of the sites listed in C.2 (except airfields). The first two AFGSC sites listed in C.2.2 are Barksdale HQ and Barksdale AFB. The third is at Whiteman AFB, MO and the fourth at Minot AFB, ND. The projected on-site staffing levels at contract start-up for those four sites are shown in H.3.2. The remaining four AFGSC sites listed in C.2.2 (F.E. Warren AFB, WY, Malmstrom AFB, MT, Offutt AFB, NE and Vandenberg AFB, CA) are expected to be government-staffed (i.e. Contractor FTEs are not expected to routinely support those locations). Contractor site staffing at contract start-up would be expected to include the Garrison Program Manager function, any temporary contractor site staffing due to unexpected attrition, and periodic contractor site support to visit government-staffed sites to coordinate evolution of the AFGSC GeoBase Service. See Section H.3.2.2.

**C.4.2.1      SUBTASK 1 – MAJCOM AND INSTALLATION TECHNICAL SUPPORT**

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The Contractor shall provide on-site GeoBase Technical Support services at HQ PACAF and HQ AFGSC and manage the GeoBase Service at units and installations that are within or come within the scope of this Contract due to Base Realignment and Closure (BRAC). The Contractor shall provide GeoBase MAJCOM technical support as described in the activities that follow:

Develop and maintain strategic and tactical plans (Section F Deliverable) for Installation GeoBase Service evolution in concert with Headquarters Air Force (HAF) Strategic Plans and PACAF and AFGSC MAJCOM level guidance. Technical Points of Contact (TPOCs) will be provided at award for the Contractor to obtain more information about relevant guidance documents.

Perform base-level end-user needs assessments to identify information or capabilities shortfalls that could be fulfilled through the GeoBase service. Use user interview techniques and tools to derive new and better methods of achieving USAF mission objectives using the PACAF and AFGSC Installation GeoBase Support capability. Identify specific end-user requirements for Installation GeoBase Support in order to better fulfill them.

Support client and server hardware and software exploited by PACAF and AFGSC installation Geo-Integration Offices (GIOs) to attain, maintain and sustain an installation geospatial information and services information structure (the GeoBase Service) including:

- Research, plan and document activities necessary to support integration of GeoBase capabilities with existing and emerging systems.
- Document configuration parameters of the various technical components of the GeoBase service (e.g. geospatial database servers) to ensure successful operation and management of those resources.
- Perform system and data administration services for acquisition, installation, configuration, systems engineering, administration and operation of Installation GeoBase Support components.
- Provide GeoBase Service Assurance to establish and uphold effective customer service procedures IAW applicable PACAF, AF, or AFGSC directives and guidance. Assuring GeoBase service involves various analysis and decision support tasks and production of information products such as maps, briefings, reports, etc. GeoBase services also include the collection, maintenance and hosting of geospatial data and metadata as well as providing standard and custom geospatial tools and applications for installation or unit personnel. Solutions include but are not limited to providing an Internet Map Server (IMS) / ArcGIS Server capability and developing GeoBase-enabled applications.
- Support client and server hardware and software at AFGSC and PACAF installation Geo-Integration Offices (GIOs) to attain, maintain and sustain an installation geospatial information and services information structure (the GeoBase Service). AFGSC will incorporate similar tools and applications as applicable to client needs and requests.

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Inventory and evaluate geospatial resources to ascertain the status of geospatial data and related information in various forms (digital files and databases, paper maps, text-based reports, etc.) as well as physical assets such as hardware, software, and field measurement equipment (e.g. GPS devices).

Research, analyze and document as necessary to obtain approval to operate for various components of the GeoBase Service. In support of this objective, the government may request the Contractor to conduct research and testing and prepare documentation such as System Security Authorization Agreements (SSAA), Command, Control, Communications, and Computers Installation Support Plans (C4ISP), Requests to Operate (RtO) and other required documents to obtain Certificates of Networthiness (CoN) and Certificates to Operate (CtO) from designated approving authorities.

Draft service level agreements (Section F Deliverable) identifying roles, responsibilities and commitments of one or more organizations at the HQ PACAF and HQ AFGSC levels pertaining to some aspect of the GeoBase service. For example, the safety office at a PACAF installation may enter into agreement with the installation-level GIO where the GIO hosts an installation GeoBase data element specific to the Safety mission but the Safety office retains responsibility for ensuring the data are kept up-to-date. AFGSC shall eventually develop similar service level agreements.

Perform imagery searches using parameters supplied by the MAJCOM TPOC to locate imagery needed to support GeoBase data layers.

Perform Data Integration activities necessary to leverage GeoBase data and the GeoBase service to facilitate their use with other information systems (or other MAJCOM or DoD sites), and to integrate geospatial and attribute data from other sources into the common information picture (CIP) or Mission Data Sets.

Perform Data Development activities necessary to produce geospatial data for use with the GeoBase service. The Contractor-developed data development procedures shall include but are not limited to 2D and 3D feature extraction, tabular and ancillary data con, and collection and processing of data acquired through GPS surveying.

Perform installation, configuration, operation and maintenance of GPS components to include but not limited to survey and resource grade portable units, antenna, and Continually Operating Reference Stations (CORS).

### **C.4.2.3      SUBTASK 2 – SPECIALIZED GIS ANALYST SUPPORT**

During the task order period of performance, the Contractor may be required to provide specialized GIS Analyst support services as it relates to the Contractor's GeoBase Service solution at PACAF and AFGSC. GIS Analyst technical support includes providing geospatial

data to a variety of functional user areas that may include, but are not limited to the following: environmental engineering, installation restoration, pollution prevention and compliance, natural and cultural resource management, related regulatory planning, infrastructure management (water and wastewater, electrical, storm water, fuels, natural gas, and communication), transportation planning, airbase planning, land use planning, community planning, information assurance, software certification, systems engineering, information assurance, land surveying, and imagery intelligence.

#### **C.4.3 TASK 3 – ACQUIRE AND MAINTAIN GEOSPATIAL DATA**

The GeoBase capability depends on an array of vector, raster, and matrix geospatial data. The Government anticipates requirements for acquisition and development of geospatial data in addition to that outlined in section C.4.2 at one or more of the PACAF and AFGSC sites listed in section C.2 to support new applications and their associated data layers. PACAF imagery is refreshed every 5 years with Asian imagery (Japan and Korea bases) typically performed one year and Alaska and Hawaii bases performed another year. Imagery is usually gathered by a commercial fly over of each base. The extent of the imagery typically includes at least all areas inside the installation boundary. Requirements beyond the fence line are determined by the installation's operational requirements and may vary. 1-meter ground resolution is required at a minimum for the cantonment area. Unimproved or non-built areas of the installation may be depicted at lower resolutions. Light Detection and Ranging (LiDAR) may be required at certain locations in PACAF (e.g., Alaska or Japan). AFGSC will need imagery refresh with resolutions similar to PACAF during the first two years of the task order and then move to a 5-year rolling cycle similar to PACAF.

The Contractor shall perform the following geospatial data acquisition and development activities (including Photogrammetric mapping services conforming to MAJCOM or DoD unit specifications):

- Planning and execution of geodetic, ground control and aerial photo control surveys
- Planning and execution of aerial image (digital or analog) acquisition
- Analytical aerotriangulation
- Softcopy photogrammetric engineering (digital orthorectification)
- Stereo compilation and production of 2D and 3D planimetric and topographic data sets per applicable PACAF, AFGSC and AF (or other MAJCOM/DoD) directives
- Production of digital orthophotography
- Geospatial database attribution
- Con of existing analog or digital data to conform to GeoBase specifications
- Field data collection activities to include but not limited to use of resource and survey grade GPS equipment
- Acquisition of commercial satellite imagery to include:
  - Coordination with the National Geospatial-Intelligence Agency (NGA) Imagery Program
  - Planning and purchasing satellite imagery from commercial vendors
  - Production of GeoReach planning CIPs to include:

- Planning and execution of commercial or national source satellite imagery acquisition
- Production of 2D and 3D planimetric and topographic data sets IAW PACAF and AF directives
- Geospatial database attribution
- GeoReach planning CIP production during extended periods of crisis or contingency support

#### **C.4.4 TASK 4 – ACQUIRE AND INTEGRATE HARDWARE AND SOFTWARE TOOLS**

The PACAF and AFGSC GeoBase service are enabled by technology. The Government anticipates the need for hardware and software tools during the course of the task order to support the GeoBase service at PACAF and AFGSC. The Government will communicate these requirements as needed during the performance of this order. The Contractor shall acquire hardware and software tools in accordance with (IAW) command and AF directives. Required hardware products or GPS systems (including resource and survey grade) shall be delivered to one or more of the sites listed in Section C.2.

#### **C.4.5 TASK 5 – DEVELOP GEOSPATIAL TOOLS AND APPLICATIONS**

The Contractor shall develop and / or adapt new and enhanced web-based tools and custom geospatial tools and applications that leverage PACAF and AFGSC electronic geospatial data bases in concert with the AF GeoBase Strategy vision and goals detailed in the GeoBase Strategy document (*Section J, List of Attachments*). As AF opportunities to streamline processes and conserve resources are identified across the AF-wide GeoBase enterprise, the GeoBase Strategy is to adopt “best of breed” geospatial solutions that represent the best of proven solutions. As a result, all commands will be able to leverage a single AF solution that meets their needs. This approach will enhance both efficiency and effectiveness. Historically, this requirement has been supported by Web Developer resources at the MAJCOM HQ level (e.g. see Web Developer resources in Section H.3.2). The support has included effort necessary to develop and deploy a new or updated application and subsequently train users on the application. Currently, development is completed via the GeoCortex Essentials tool. Development and deployment of a Geospatial tool or Application typically lasts 6-9 months, including validation of requirements, development, deployment and training. The associated training typically lasts 4 to 6 weeks, depending upon the sites deployed. The Government has estimated the development of 4-10 geospatial tools and applications per year on behalf of PACAF and AFGSC (total includes tools and applications developed by the on-site web developer at each MAJCOM). However, the estimate is subject to change based on the complexity of the applications and PACAF / AFGSC priorities.

The Contractor shall utilize CLIN X001A (PACAF Labor) and X001B (AFGSC Labor) for Task 5 support provided by the two Web Developers listed in Section H.3.2. The Contractor shall utilize CLIN X008 for any additional Web Developer resources to meet customer specific deadlines for product delivery or to provide specialty development capabilities not currently inherent within the team. CLIN X008 shall support both PACAF and AFGSC’s

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needs with respect to development work that cannot be accomplished by the on-site web developers; there is not a separate CLIN for PACAF and AFGSC due to the uncertainty of the additional support that will be required (CLIN X008 is NTE). **See Section B.6 for further details about funding of CLIN X008.**

An approved work plan that details milestones, deliverables, schedule, and estimated cost plus fixed fee labor for development and deployment of each new geospatial tool and application or for each enhancement of previously developed geospatial tools shall be detailed and incorporated in the Project Management Plan (PMP) prior to start of any tools development under CLINs X008. Labor costs will be incrementally funded for each tool within the cost plus fixed fee labor ceiling for CLINs X008 for each contract year. This technical support is in addition to normal maintenance, development and enhancement of geospatial tools performed by on-site web developers at HQ AFGSC and HQ PACAF. Geospatial tools are currently written using the GeoCortex Essentials software running in concert with Oracle and ESRI ArcGIS.

A wide variety of geospatial tools and applications have been previously developed for PACAF to better visualize specific types of geospatial data. These tools include:

- A web-based geospatial viewer selected by HQ Air Staff as a “best of breed” for AF-wide use through the Air Force Portal

- An Airfield Obstruction System (AOBS) application that helps to improve flight safety

- A building space use and management (SUMS) tool that depicts the Civil Engineering infrastructure within buildings

- A fuel storage tank custodial application that details both geospatial data and related metadata about permits, inspections and chains of ownership

- A data vault application that electronically consolidates information to eliminate redundancy by electronically capturing peripheral documents and related metadata (e.g., drawings, surveys, historical records, management documents, site diagrams, facility records, work orders, and construction reports)

- A web based application Electronic Base General Plan (eBGP) allows users to view various projects in the Automated Civil Engineer System – Program Management (ACES PM) that are assigned to a building. eBGP provides an easier way for general users to view ACES PM data without going through the ACES PM interface or requiring an ACES PM system login.

- A web-based emergency response tool deployed PACAF-wide, the AF Incident Manager (AFIM) supports real world events and exercises. The AFIM tool can be accessed from any desktop with a connection to the unclassified network.



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AFIM allows users to track incidents (e.g., fire, road closures, or emergencies), set up cordons and perform plume modeling.

Geospatial tools and applications developed to date for AFGSC to better visualize specific types of geospatial data include the Road Condition Viewer that provides online viewing and editing of near-real-time mission-critical road condition maps via a simple web interface. All Common Access Card (CAC)-authenticated users on base and in the missile field can use this tool. This GeoBase-enabled capability ensures safe travel and strategic access to and from 155 Launch Facilities and Missile Alert Facilities.

The PACAF GeoBase service involves developing and exploiting geospatial tools and applications software solutions that extend and focus the capabilities of COTS software. The Contractor shall design, develop, test, and implement as operational custom software tools and applications that leverage and enhance the GeoBase service. Custom geospatial tools and applications software developed shall conform to AF and DoD standards in force at the time of development. Contractor custom geospatial tools and applications software development activities shall include but are not limited to the following examples:

- Requirements definition and tracking
- System design and prototyping
- Process modeling
- Architecture and database design
- Software development and or Con to enable technology
- Testing Software updates and s
- System documentation, user manual and tutorial development
- Training
- Packaging and deployment
- Technical support

AFGSC will eventually incorporate similar tools and applications as applicable to client needs and requests. PACAF and AFGSC participate in Headquarters Air Force working groups seeking to standardize the GeoBase service. Guidance from those groups will impact future solutions.

### **C.4.6 TASK 6 – CONDUCT GEOBASE TRAINING**

Sustainment of the GeoBase service depends on continuing ancillary education and user training of those personnel responsible for delivery of GeoBase services. The Contractor shall develop standard and custom training courses to be conducted at PACAF and AFGSC sites listed in section C.2. The Government may require classroom training of military and civilian personnel in the use of a COTS or custom geospatial tools and applications software. A typical training course would be at a government facility with a class size of 10 to 20 student users and duration of three to five days (plus one set-up day). Typically, the training at PACAF is twice per year for experienced users of the GeoBase service. AFGSC's training is

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anticipated to be quarterly for less experienced users initially who have technical school training. Anticipated training courses include but are not limited to for example:

- Development and maintenance of geospatial databases
- 2D and 3D Feature Extraction from digital imagery
- GIS and database analysis and map production
- Use of geo-enabled applications data collection and processing using GPS technologies
- Vendor-supplied training in the use of their software or hardware tools

The Contractor shall support one-on-one and small group training in the following areas when requested by the Government to:

- Analysis of digital imagery
- Use of remote sensing techniques
- Development of GIS courses
- Development of Instruction manuals
- Support for data translation
- Design, development, and production of custom cartographic products, multimedia, and special documents
- Production, management, and delivery of information assurance for geospatial data elements associated with the GeoBase program to include Common Installation Pictures (CIPs), Regional Installation Pictures and Mission Data Sets.

### **C.5 SECTION 508 COMPLIANCE REQUIREMENTS**

Unless the Government invokes an exemption, all Electronic and Information Technology (EIT) products and services proposed shall fully comply with Section 508 of the Rehabilitation Act of 1973, per the 1998 Amendments, U.S.C. 794d, and the Architectural and Transportation Barriers Compliance Board's Electronic and Information Technology Accessibility Standards at 36 CFR 1194. The Contractor shall identify all EIT products and services proposed, identify the technical standards applicable to all products and services proposed and state the degree of compliance with the applicable standards. Additionally, the Contractor must clearly indicate where the information pertaining to Section 508 compliance can be found (e.g., Vendor's or other exact web page location). The Contractor must ensure that the list is easily accessible by typical users beginning at time of award.